

VII.—*The Anatomy and Description of a new Species of Arion.* By WALTER E. COLLINGE, Mason College, Birmingham.

[Plate V. A.]

IN July last I received from Mr. E. W. Swanton, of Bratton St. Maur, Wincanton, a series of slugs collected on a lawn at Wainsgrove, Somersetshire, amongst which I noticed a small *Arion*, which I informed Mr. Swanton was a young example of *Arion empiricorum*, Fér. On a closer examination, however, I was struck by the active way in which it crawled about, the flatness of the back, and the manner in which it elongated itself. After a few days it was killed by drowning, and preserved in alcohol. Not until now have I been able to make an examination of it internally, and it is at once evident, from the fully developed condition of the generative system, that it is an adult slug, and from the morphology of the same it can no longer be referred to *A. empiricorum*.

Although I am acquainted with most of the members of this genus and its allies, I am not aware of any species that approach at all near to the one described below. I mention this as, being described from only a single example, and collected in a garden, it might possibly have been introduced in the roots of foreign plants. Mr. Swanton has so carefully worked the slug-fauna of Somersetshire, that I am somewhat surprised he has not met with this species before. I have examined all previous consignments of small Arions which he has from time to time sent me, but find nothing approaching it amongst them.

Arion elongatus, sp. n. (Pl. V. A. figs. 1-4.)

Head and tentacles blackish, the latter slightly lighter than the head. Centre of mantle marked with a pyriform mass of deep black, bounded on either side by a narrow yellowish-grey line, below by a deep black band which gradually shades off into a yellowish grey. Whole of dorsal surface a deep black, bounded, like the mantle, by a yellowish-grey line, then a deep black band, which shades off into a yellowish grey. Foot-fringe yellow, with sepia lineoles. Sole yellowish; lateral planes distinct from median plane, which latter is marked in a dendritic manner and slightly lighter in colour. Rugæ large and flat. Respiratory orifice distinct. Keel absent, the back being almost flat. Length alive 24 millim.; length in alcohol 15 millim.; length of mantle in

alcohol 5 millim.—Externally the slug somewhat resembles certain young forms of *A. empiricorum*, Fér., and forms of *A. hortensis*, Fér.; its structure, however, is very different.

Having so far only been able to obtain a single example, I have deferred an examination of anything but the generative organs. As soon as further specimens come to hand I will describe the nervous and digestive systems, &c., which seem interesting.

There are two vestibules, an upper and a lower. The lower portion of the vas deferens—the sperm-duct (“Patronenstreeke”)—is characterized by an absence of any ring-like swelling at its lower end, a feature very common in the *hortensis* group of Arions. There is no differentiation between the sperm-duct and the vas deferens, the one gradually passing into the other. There is only a very small duct to the receptaculum seminis, which is an elongated sac-like body. The free oviduct is exceedingly large; it passes from the upper vestibule as a broad tube, and at about a third of its length dilates into a sac-like body, and is then continued for a short distance as a tube, and opens into a pouch-like portion, which makes a turn towards the upper vestibule and is continued as a broad tube, which higher up becomes constricted and passes into the oviduct proper as a fine tube. Attached to the base of the pouch-like portion of the free oviduct is a short broad retractor muscle.

EXPLANATION OF PLATE V. A.

Fig. 1. *Arion elongatus*.

Fig. 2. Lower portion of the generative organs.

Fig. 3. Rugæ from dorsal surface of the body.

Fig. 4. Portion of sole of foot, showing lateral and median planes.

l.p. Lateral plane of foot-sole.

l.v. Lower vestibule.

m.p. Median plane of foot-sole.

ov. Oviduct.

pr. Prostate.

r.m. Retractor muscle.

r.s. Receptaculum seminis.

s.d. Sperm-duct.

v.d. Vas deferens.

VIII.—Descriptions of Two new Species of Macroscelides.

By OLDFIELD THOMAS.

IN attempting to determine an elephant-shrew of the genus *Macroscelides* brought by Dr. J. W. Gregory from East Africa, specimens already in the Museum of the two following species have been re-examined and prove to need description:—